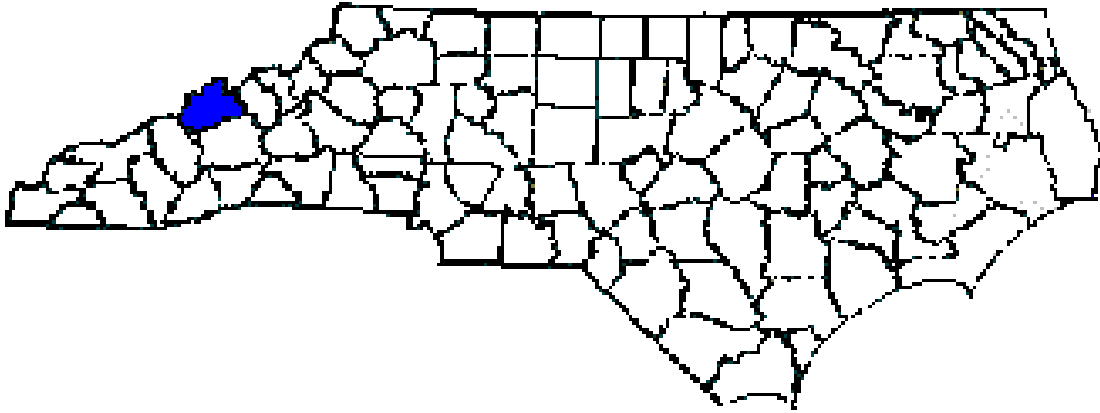


# ANNUAL REPORT FOR 2015



**Preservation Sites E, G, H, K, L, O, P, Q, and R**  
**Madison County**  
**TIP No. R-2518A**  
**COE Action ID: SAW-2007-2197-357/300**  
**DWR #: 20071134**



Prepared By:  
Natural Environment Section & Roadside Environmental Unit  
North Carolina Department of Transportation  
November 2015

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Appendix A – Site Photographs

Appendix B – Photo Point Locations



## **SUMMARY**

The following report summarizes the stream monitoring activities that have occurred during the Year 2015 at the Preservation Sites E, G, H, K, L, O, P, Q, and R in Madison County. This report provides the monitoring results for the fourth formal year of monitoring (Year 2015). The Year 2015 monitoring period was the fourth of five scheduled years of monitoring on the Preservation Sites (See Success Criteria Section 2.1).

Based on the overall conclusions of monitoring at the Preservation Sites, these sites have met the required monitoring protocols for the fourth formal year of monitoring. NCDOT will continue the visual inspection of the Preservation Sites for 2016.

## **1.0 INTRODUCTION**

### **1.1 Project Description**

The following report summarizes the stream monitoring activities that have occurred during the Year 2015 at the Preservation Sites E, G, H, K, L, O, P Q, and R, hereafter known as the “Preservation Sites.” The Preservation Sites provide mitigation for stream impacts associated with Transportation Improvement Program (TIP) number R-2518A in Madison County.

The Preservation Sites E, G, H, K, L, O, P, Q, and R provided approximately 13,481 linear feet of stream preservation. The Preservation Sites for A and N provided approximately 627 linear feet of preservation. Preservation photos for mitigation sites A and N will be included in their individual monitoring reports. Stream preservation involved acquiring and fencing the sites within NCDOT right-of-way.

### **1.2 Purpose**

In order for the mitigation sites to be considered successful, the sites must meet the success criteria. This report details the monitoring in 2015 at the Preservation Sites. Hydrologic monitoring was not required for these sites.

### **1.3 Project History**

August 2012	Visual Monitoring (Year 1)
August 2013	Visual Monitoring (Year 2)
July 2014	Visual Monitoring (Year 3)
July 2015	Visual Monitoring (Year 4)

### **1.4 Debit Ledger**

The entire stream mitigation sites were used for the R-2518A project to compensate for unavoidable stream impacts.



Figure 1. Vicinity Map





**Figure 2. Vicinity Map**



**Figure 3. Vicinity Map**



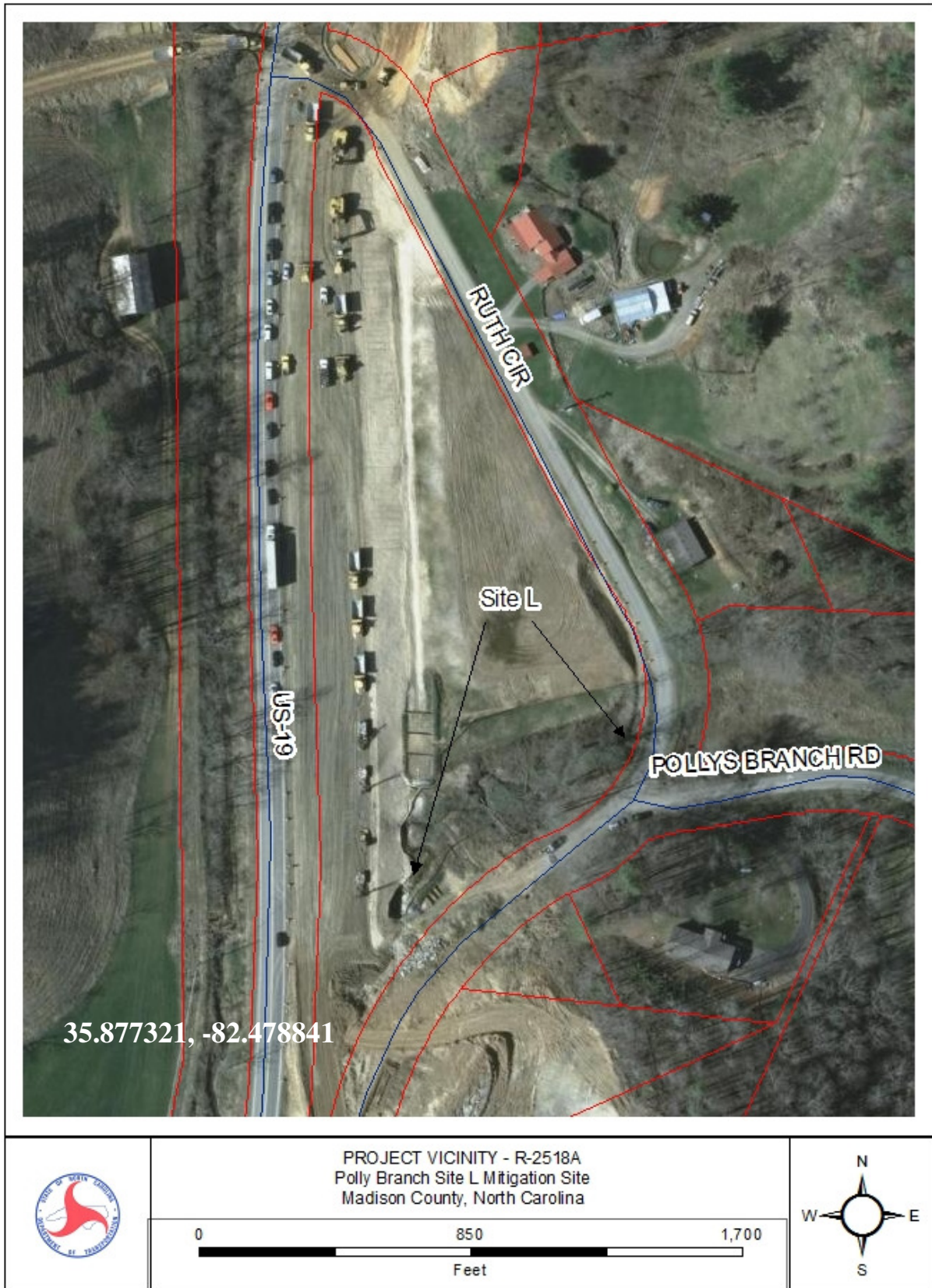


**Figure 4. Vicinity Map**





**Figure 5. Vicinity Map**



**Figure 6. Vicinity Map**



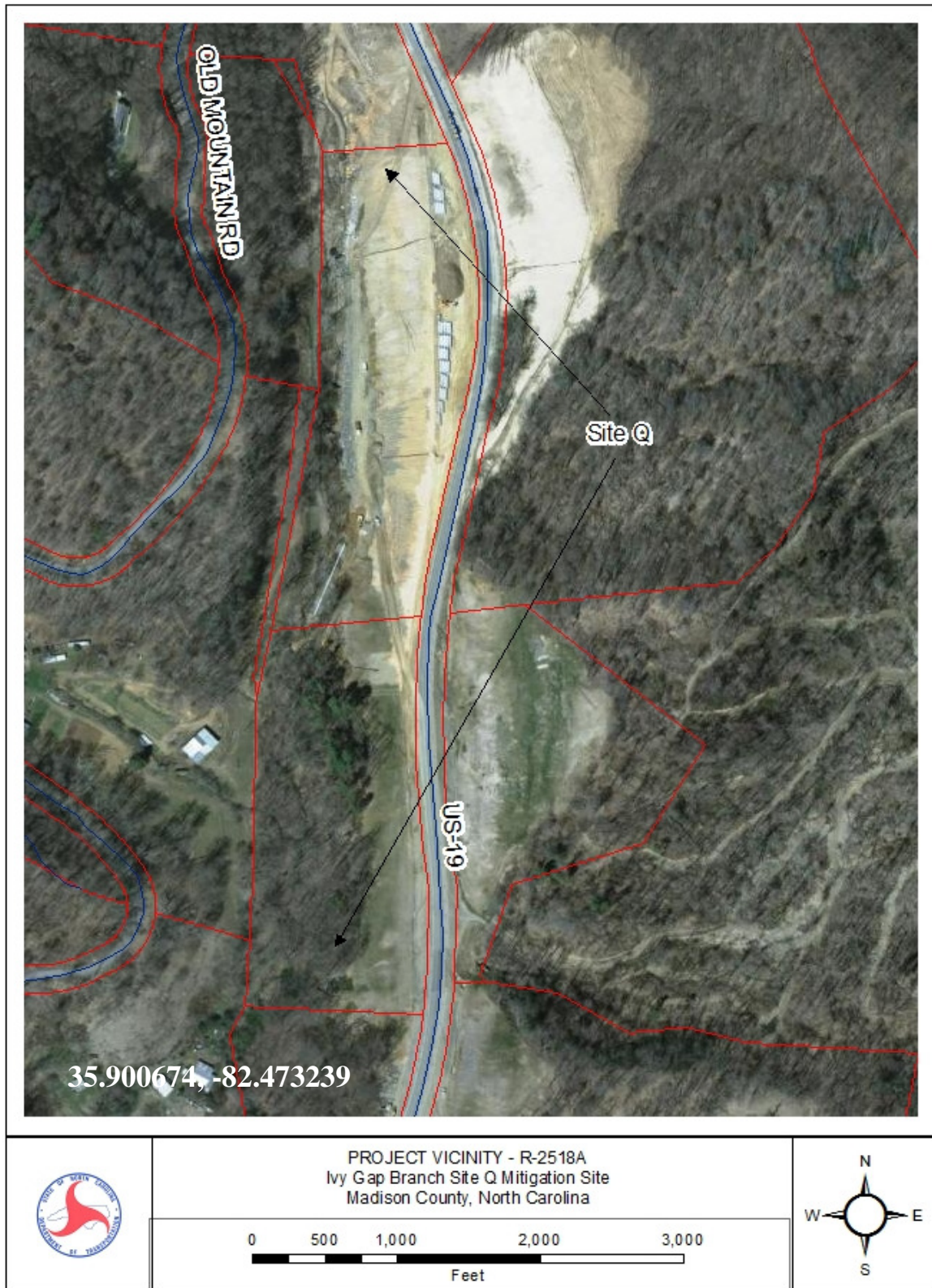


**Figure 7. Vicinity Map**





**Figure 8. Vicinity Map**



**Figure 9. Vicinity Map**





**Figure 10. Vicinity Map**

## **2.0 STREAM ASSESSMENT**

### **2.1 Success Criteria**

Per NCDWQ condition #4, the permittee shall monitor the preservation sites by visual inspection. Photos will be taken and comments noted on plant survival. The monitoring shall be conducted annually for a minimum of five (5) years. The monitoring results shall be submitted to DWQ in a final report within sixty (60) days after completing monitoring. After 5 years the NCDOT shall contact the DWQ to schedule a site visit to “close out” the mitigation site.

### **2.2 Stream Description**

#### ***2.2.1 Post-Construction Conditions***

The preservation of sites E, G, H, K, L, O, P, Q, and R will involve acquiring and fencing the sites within NCDOT right of way.

#### ***2.2.2 Monitoring Conditions***

The objective of Preservation Sites E, G, H, K, L, O, P, Q, and R is to preserve the stream and riparian areas.

### **2.3 Results of the Stream Assessment**

#### ***2.3.1 Site Data***

The assessment included visual inspection of the Preservation Sites. The Preservation Sites were photographed from permanent photo point locations. The sites are being preserved within NCDOT's right-of-way.

## **3.0 OVERALL CONCLUSIONS/RECOMMENDATIONS**

The Preservation Sites have met the required monitoring protocols for the fourth formal year of monitoring. NCDOT will continue monitoring the Preservation Sites in 2016.

## **4.0 REFERENCES**

Stream Mitigation Plan, US Highway 19, R-2518A On-Site Mitigation  
Madison County, North Carolina, August 2006.

Design Plans for R-2518A, US 19 from I-26 to 0.8 KM east of the Yancey Co.  
Line, Stream Mitigation (Preservation, Enhancement, and Restoration),  
HSMM.

North Carolina Department of Transportation (NCDOT), April 29, 2008. 404 and  
401 Individual Permits for R-2518A and R-2518B (ACOE Permit No. 2007-  
2197-357/300 and DWQ Project No. 20071134, Individual Certification No.  
3706).

**APPENDIX A**  
**SITE PHOTOGRAPHS**



# Preservation Sites



Photo 1 (Site E)



Photo 2 (Site G)



Photo 3 (Site G)



Photo 4 (Site H)



Photo 5 (Site H)



Photo 6 (Site K)

July 2015



# Preservation Sites



Photo 7 (Site K)



Photo 8 (Site K)



Photo 9 (Site K)



Photo 10 (Site K)



Photo 11 (Site K)



Photo 12 (Site K)

July 2015



# Preservation Sites



Photo 13 (Site L)



Photo 14 (Site O)



Photo 15 (Site O)



Photo 16 (Site O)



Photo 17 (Site O)



Photo 18 (Site P)

July 2015



# Preservation Sites



Photo 19 (Site Q)



Photo 20 (Site Q)



Photo 21 (Site Q)



Photo 22 (Site R)



Photo 23 (Site R)



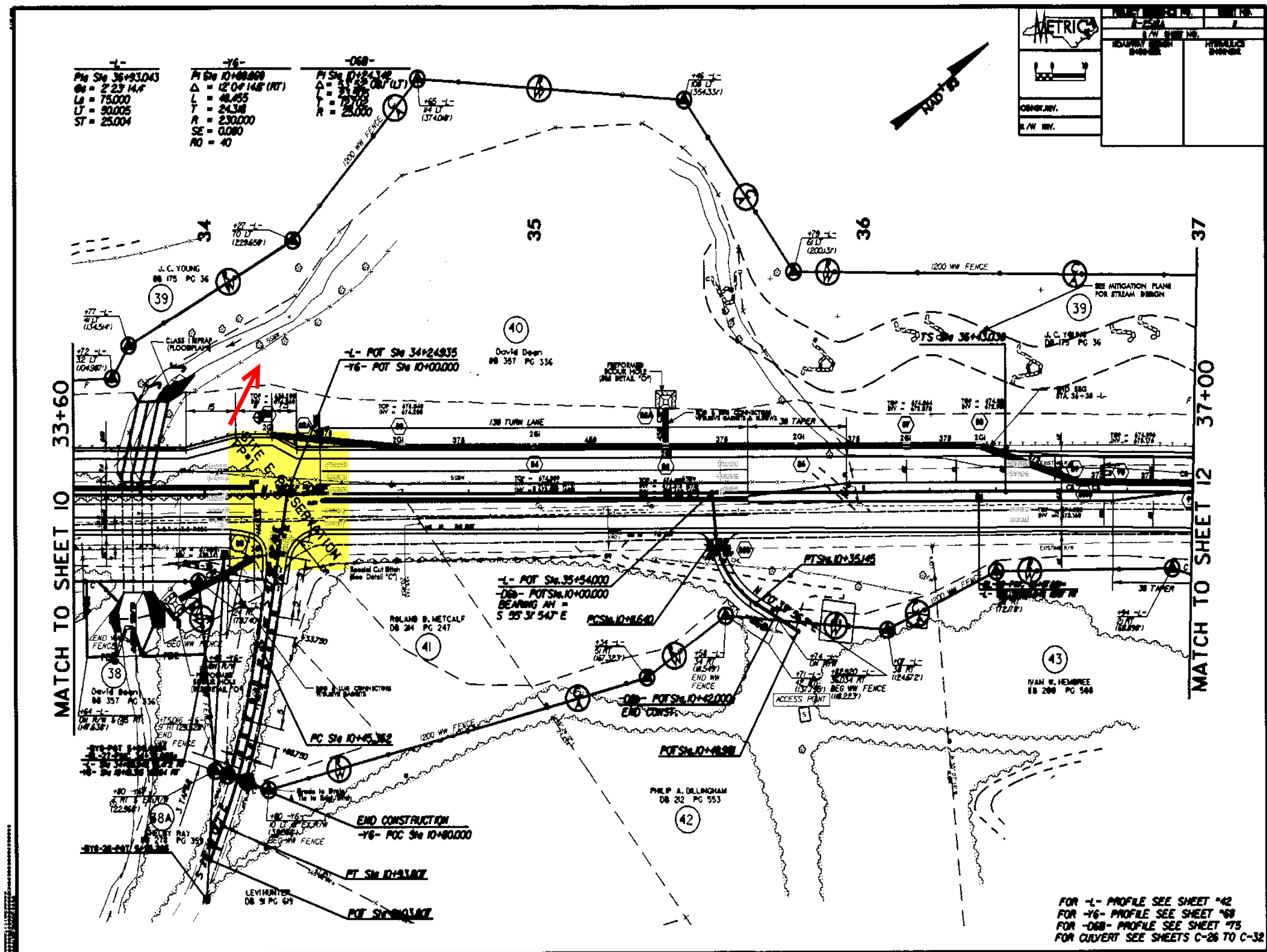
Photo 24 (Site R)

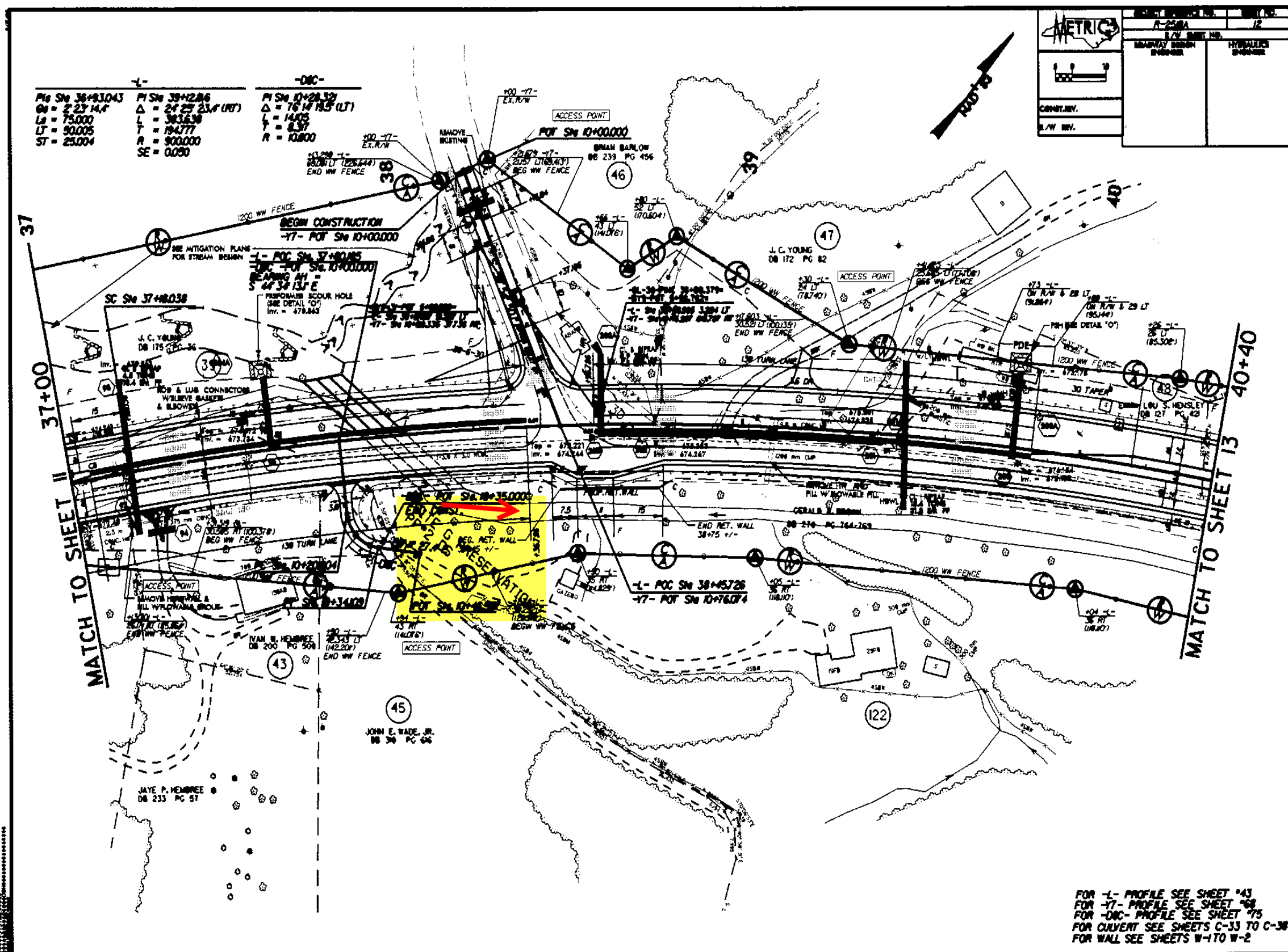
July 2015

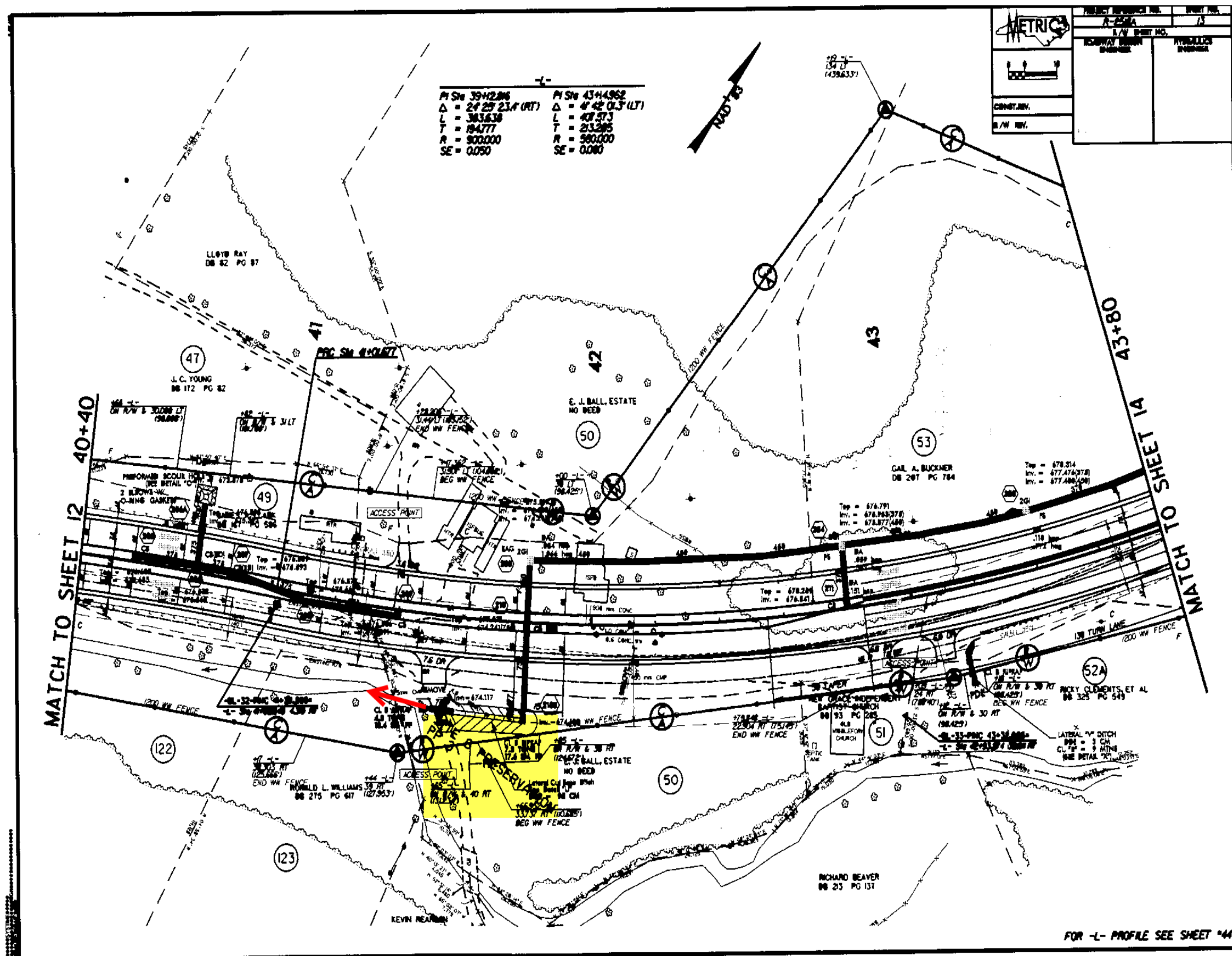


**APPENDIX B**

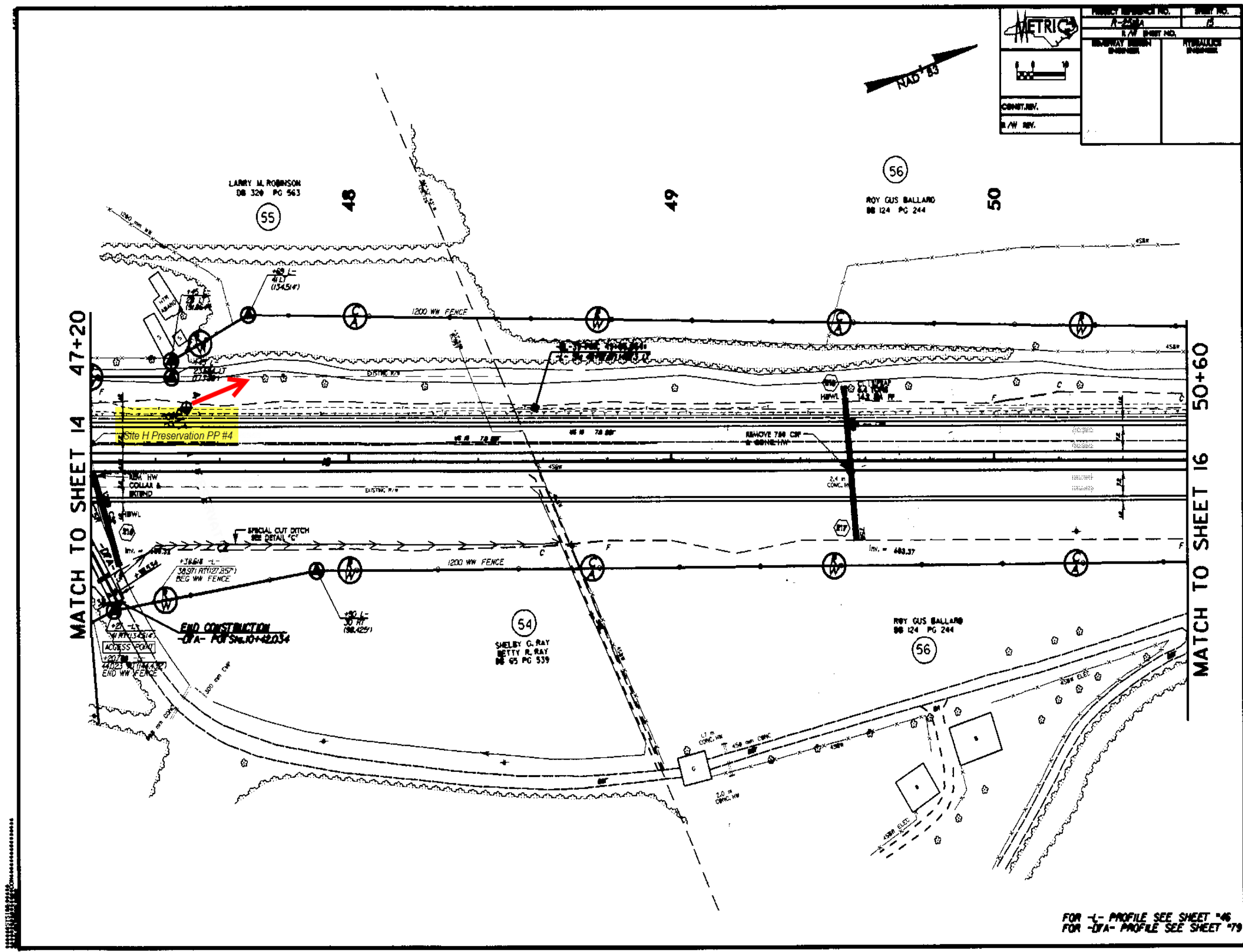
**PHOTO POINT LOCATIONS**









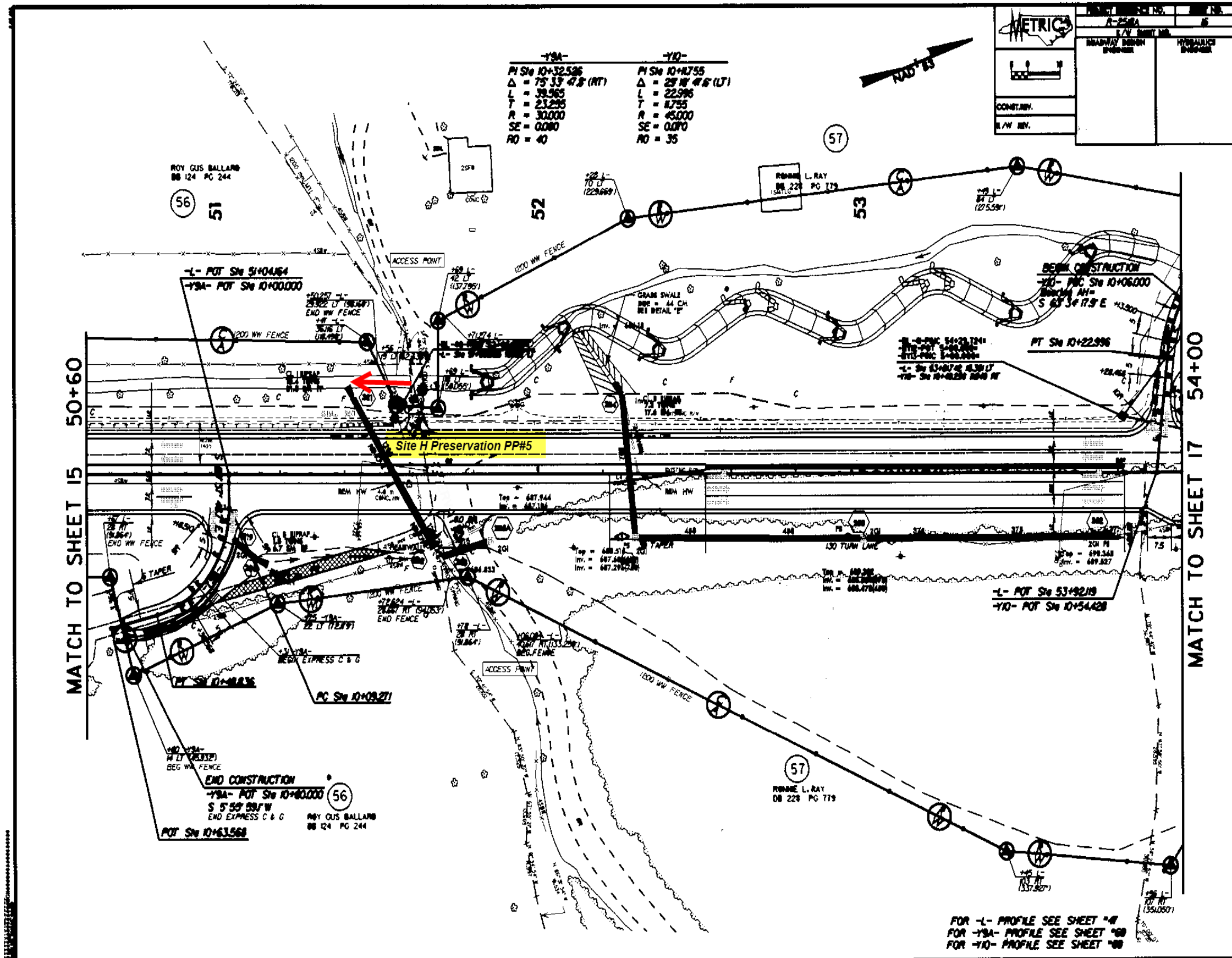


CONTRACT NO.  
SHEET NO.  
DATE

PROJECT REFERENCE NO.	SHEET NO.
A-250A	15
DATE	
DESIGNED BY	CHECKED BY
DRAWN BY	APPROVED BY

FOR -L- PROFILE SEE SHEET 146  
FOR -DPA- PROFILE SEE SHEET 179

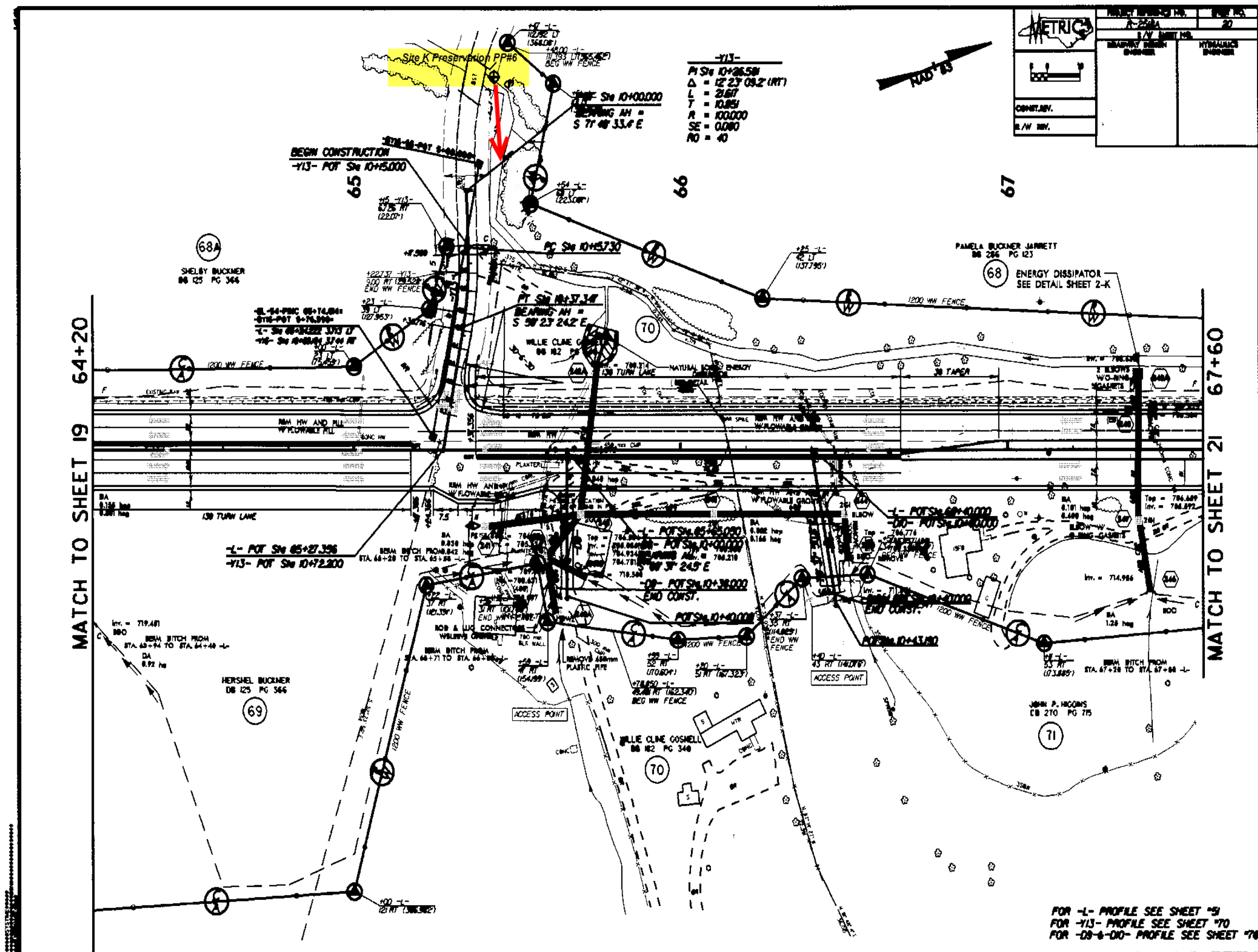




-Y9A-	-Y10-
PI Sta 10+32.526	PI Sta 10+17.55
$\Delta = 75^{\circ} 33' 48''$ (RT)	$\Delta = 29^{\circ} 18' 48''$ (LT)
L = 39.565	L = 22.985
T = 23.295	T = 8.755
R = 30,000	R = 45,000
SE = 0.080	SE = 0.070
RO = 40	RO = 35

METRICS	
A-254A	
1/4" = 100'	
ROADWAY DESIGN	HYDRAULIC DESIGN
CONSTRUCTION	
1/4" = 100'	

FOR -L- PROFILE SEE SHEET "4"  
FOR -Y9A- PROFILE SEE SHEET "60"  
FOR -Y10- PROFILE SEE SHEET "60"



METRICS	PROJECT NUMBER	22
	DATE	1-2-84
	BY	J.V. JONES
	CHECKED BY	
CONTRACT	NO.	
	DATE	
S/W	NO.	
	DATE	

-Y13-  
P.S. 10+25.50  
Δ = 12.27 (9.2 RT)  
L = 21.67  
T = 10.85  
R = 100.00  
SE = 0.000  
NO = 40

FOR -L- PROFILE SEE SHEET 19  
FOR -Y13- PROFILE SEE SHEET 70  
FOR -DS- & -DO- PROFILE SEE SHEET 70

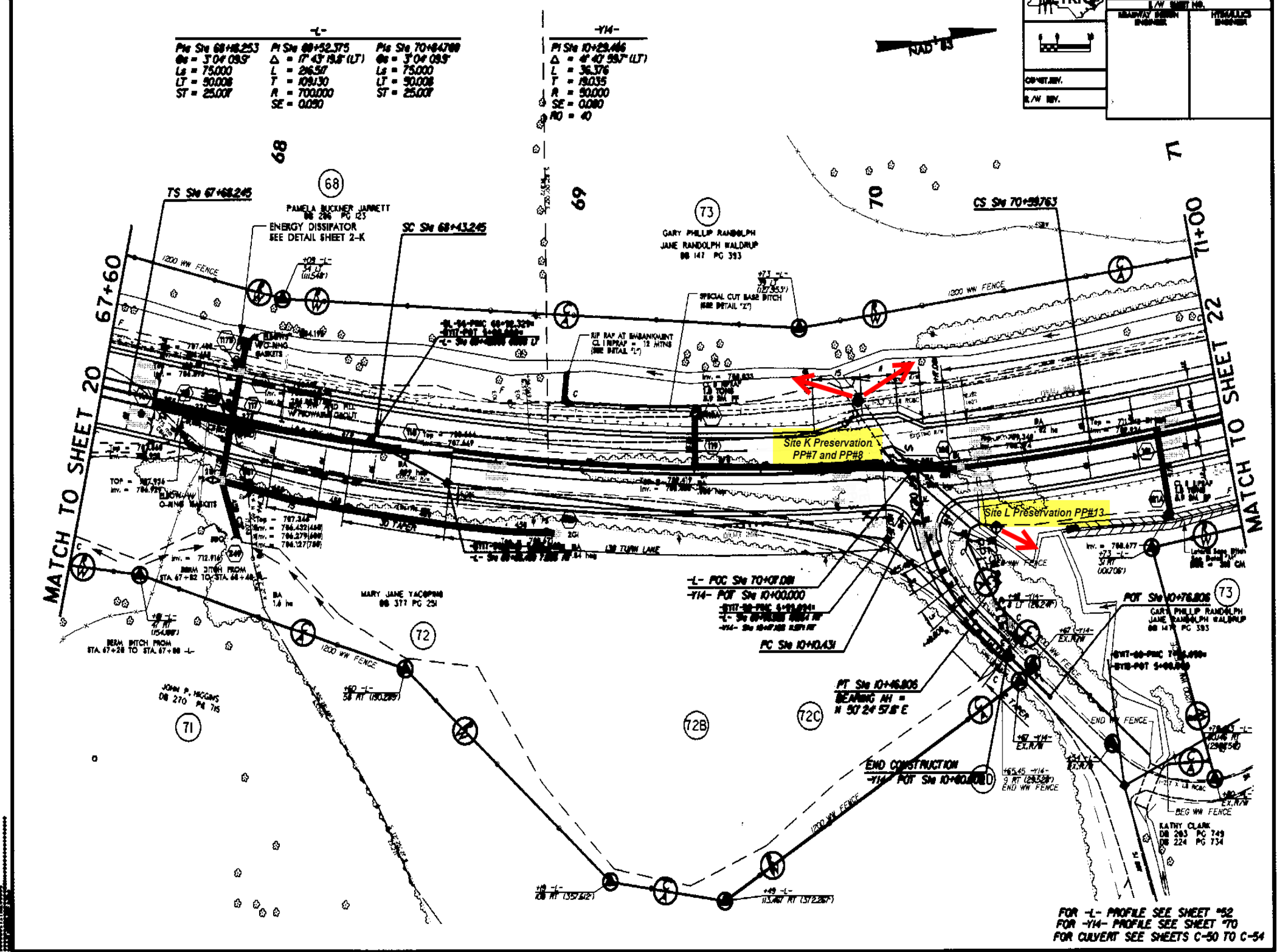
-L-  
 Pts Sta 68+48.253 Pts Sta 69+52.375 Pts Sta 70+47.888  
 Δ = 3°04'09.5" Δ = 17°43'19.8" (LT) Δ = 3°04'09.5"  
 L = 75.000 L = 266.507 L = 75.000  
 LT = 90.008 T = 109.130 LT = 90.008  
 ST = 25.007 SE = 0.090 ST = 25.007

-Y14-  
 Pts Sta 10+28.466  
 Δ = 4°47'59.7" (LT)  
 L = 36.376  
 T = 19.035  
 R = 90.000  
 SE = 0.080  
 RD = 40

**METRICS**

CONVEY. DIV.  
 R/W DIV.

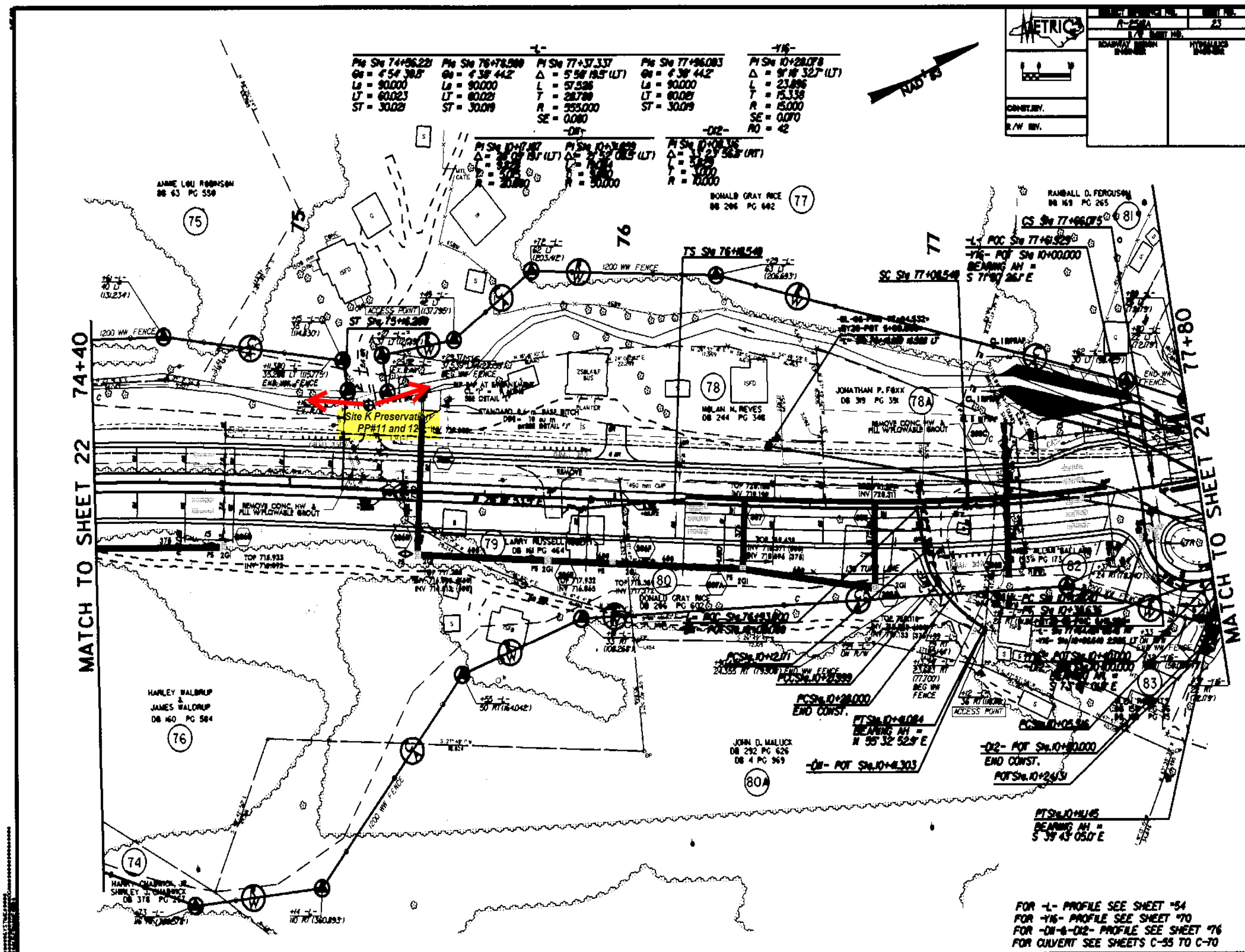
PROJECT NO.	SHEET NO.
R-2584	8
DESIGNED BY	CHECKED BY
REVIEWED BY	APPROVED BY

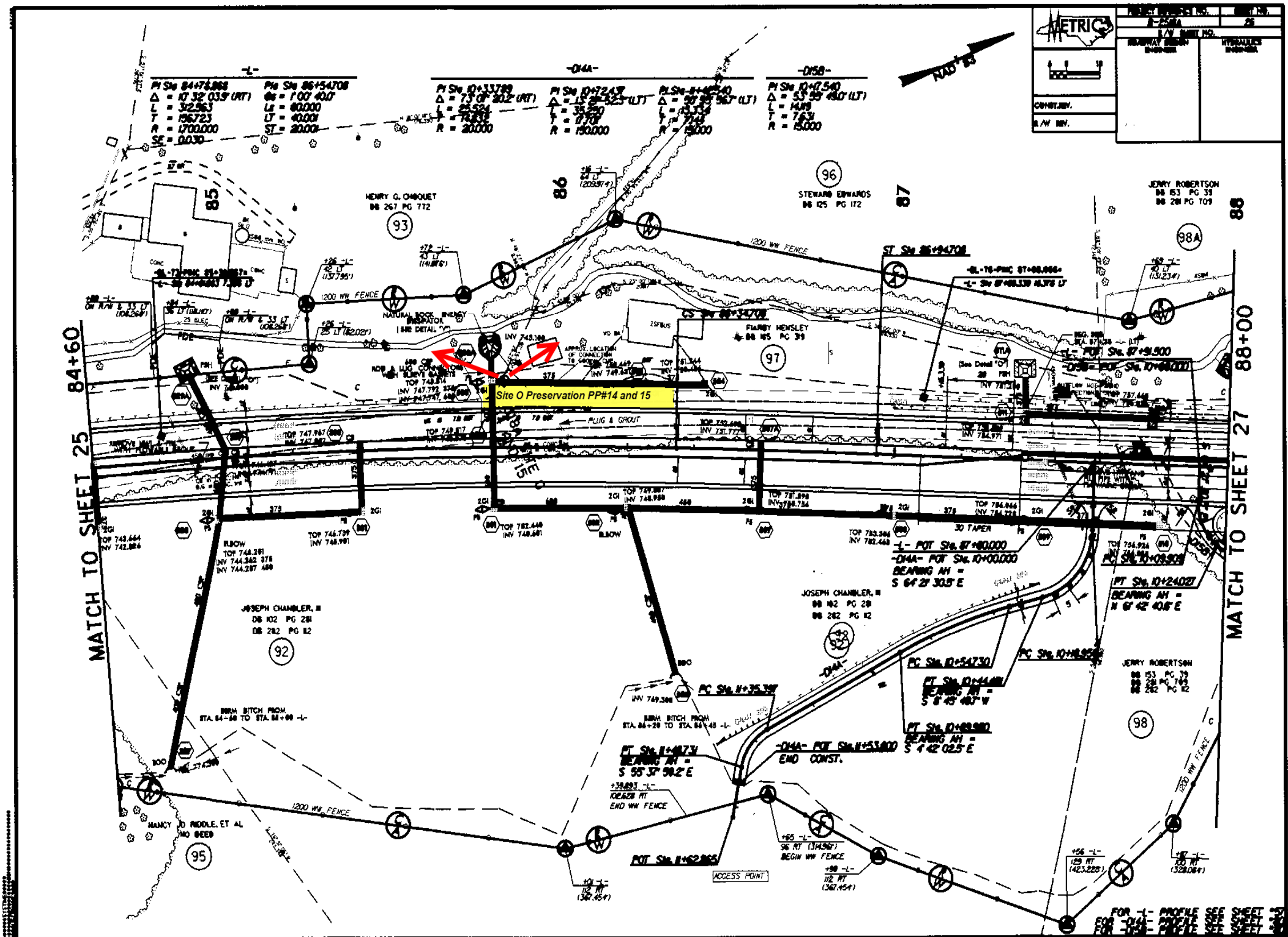


FOR -L- PROFILE SEE SHEET #52  
 FOR -Y14- PROFILE SEE SHEET #70  
 FOR CULVERT SEE SHEETS C-50 TO C-54

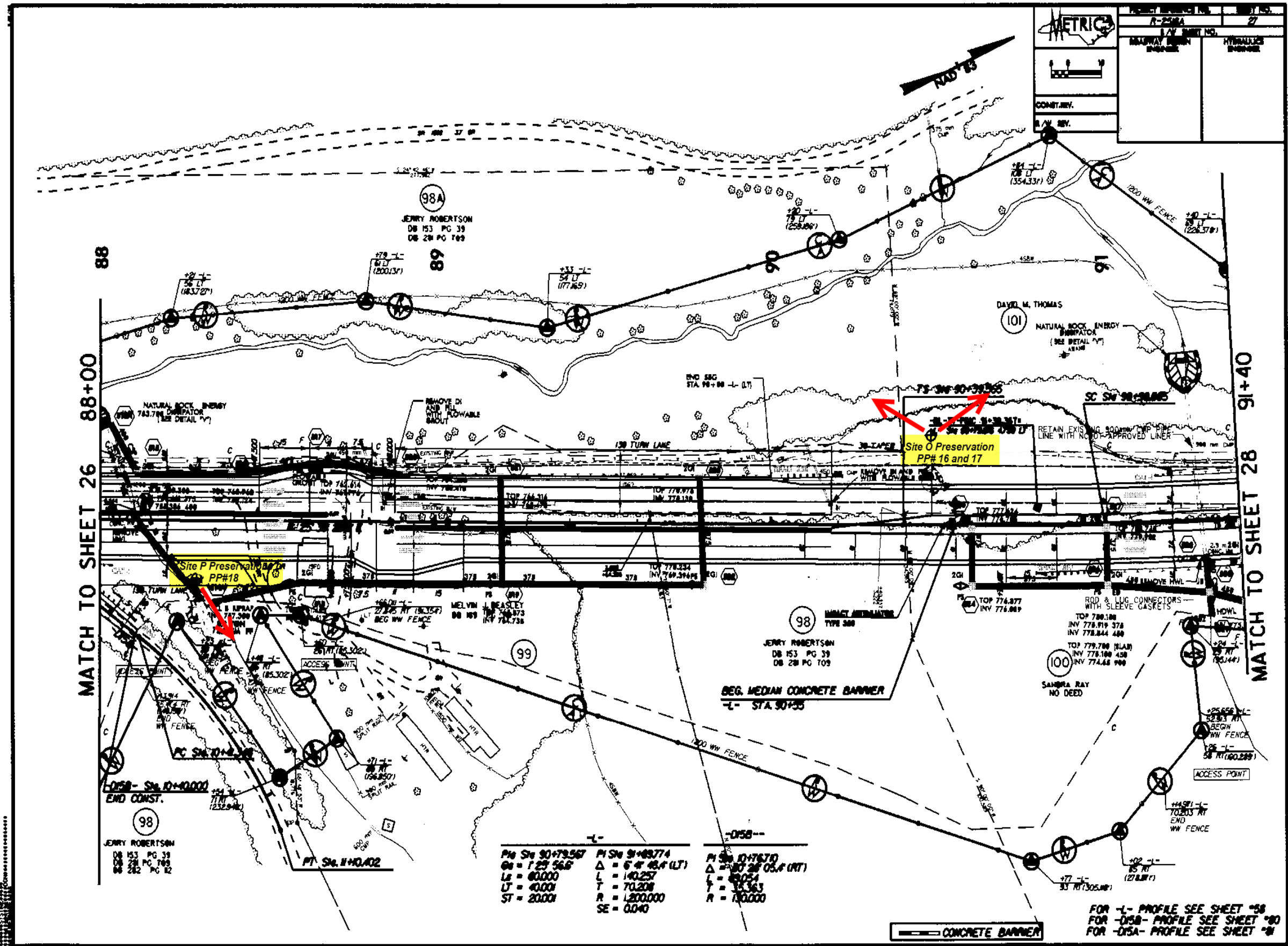


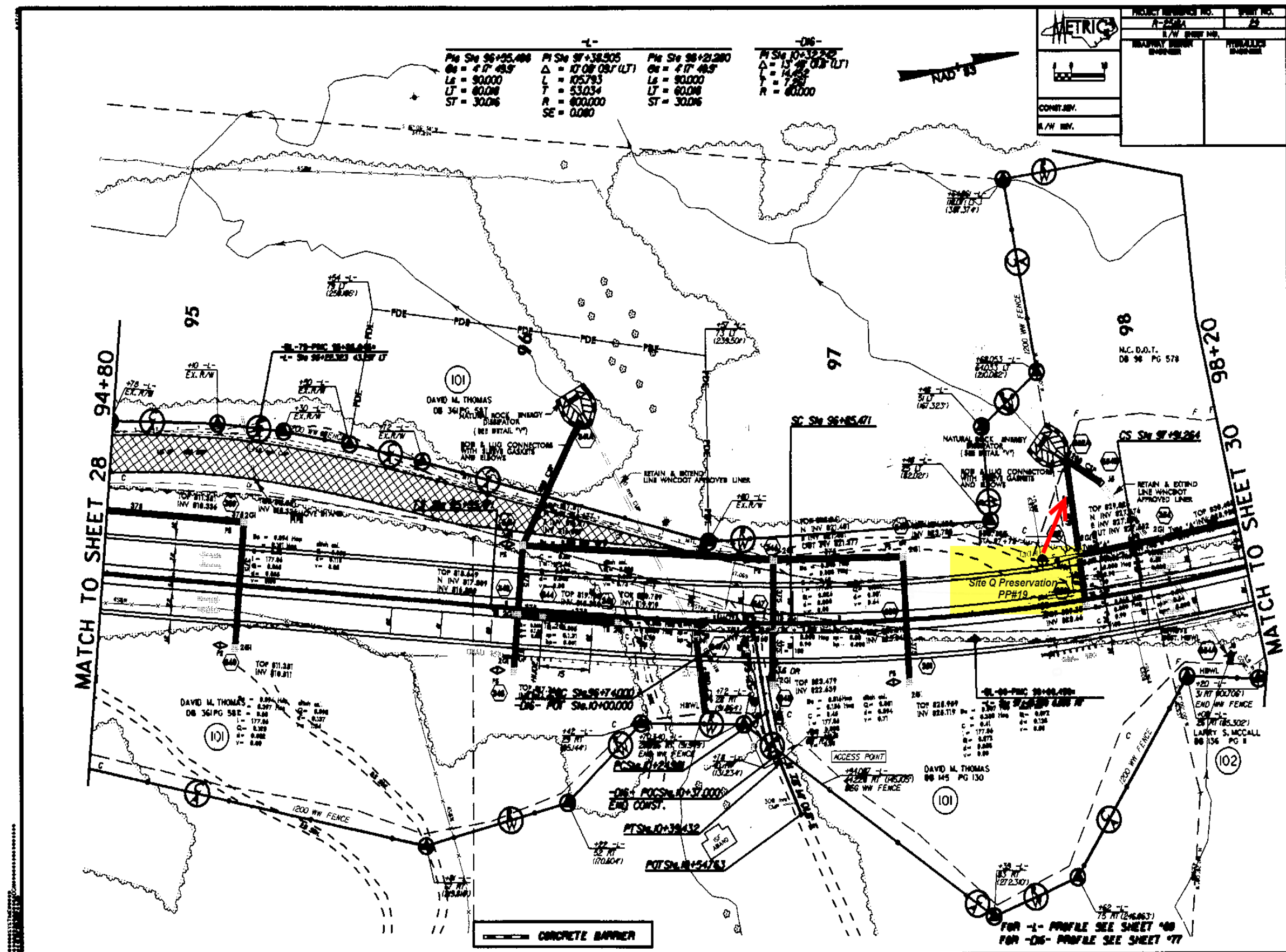




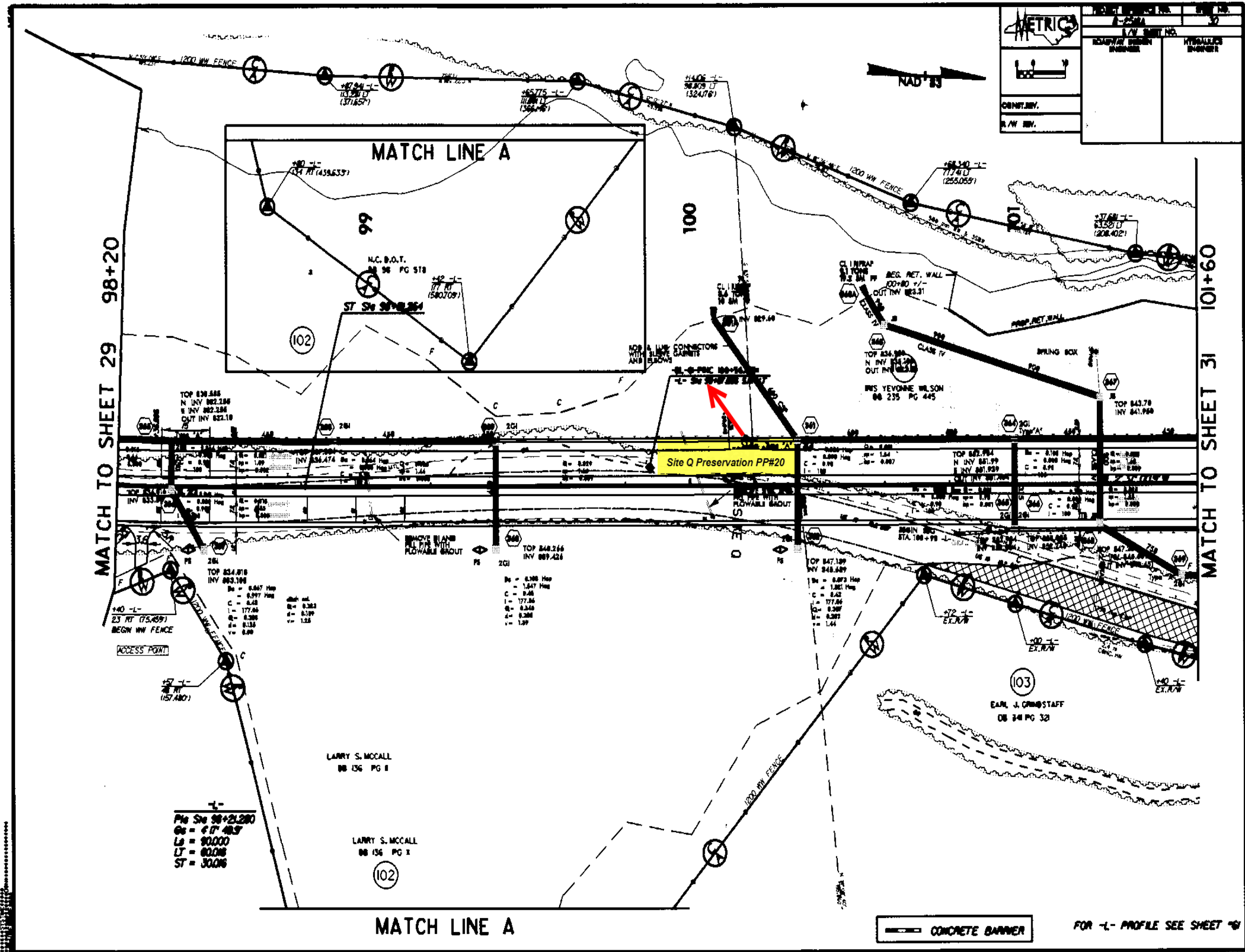








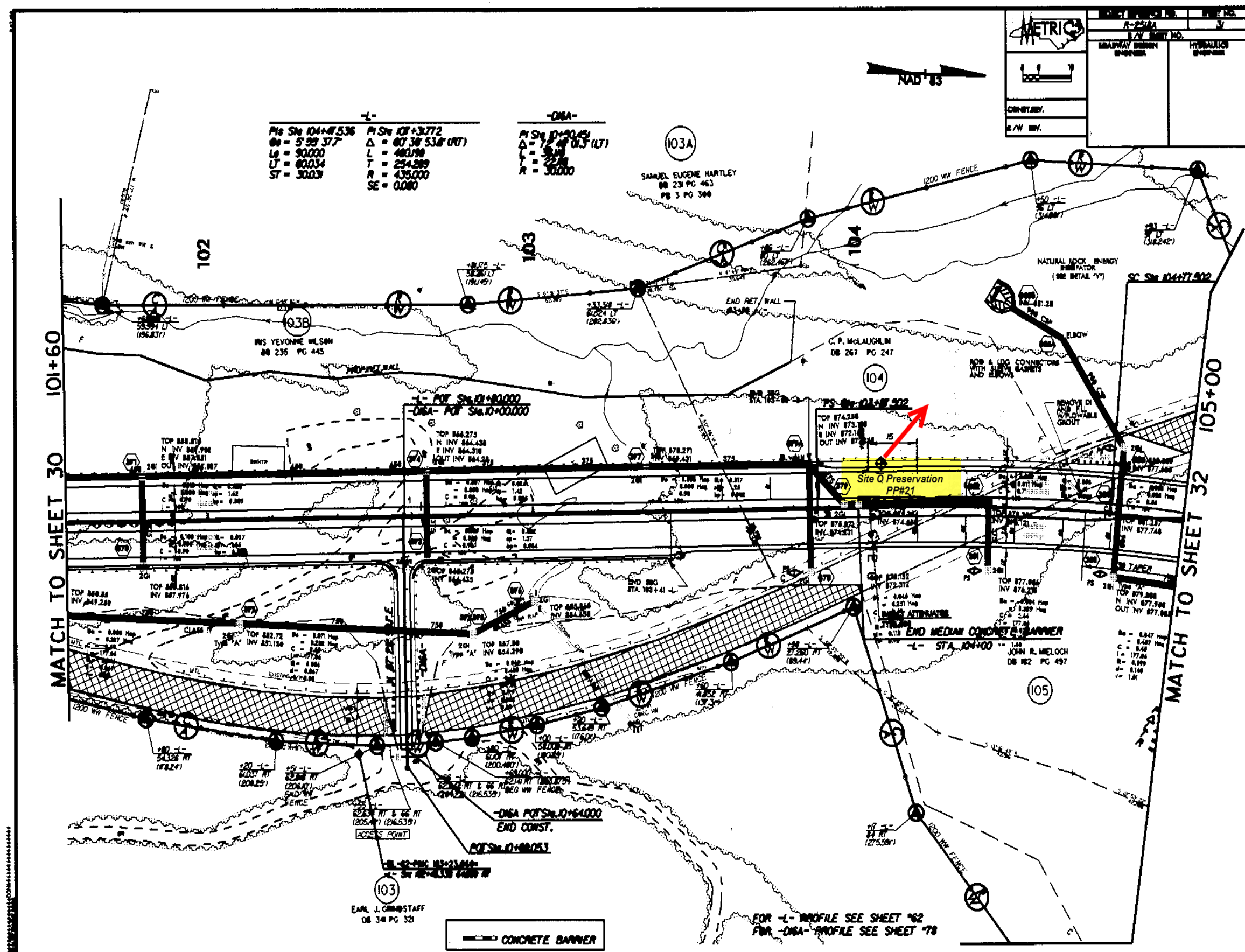




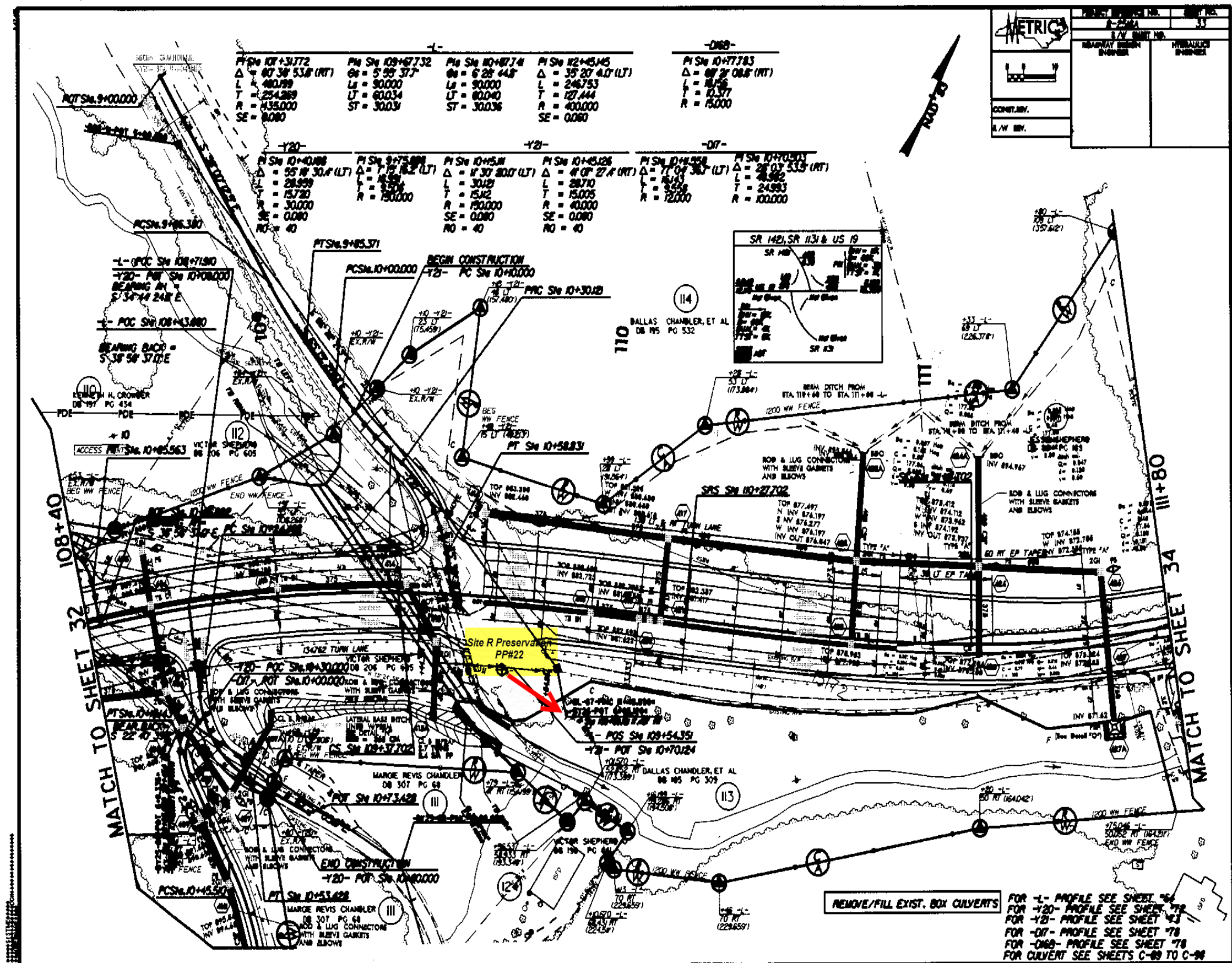
PROJECT NO. 32	
SHEET NO. 32	
ROADWAY DESIGN ENGINEER	HYDRAULIC ENGINEER
DATE: 11/1/83	
PROJECT: 11/1/83	
CONTRACT: 11/1/83	
SHEET: 11/1/83	

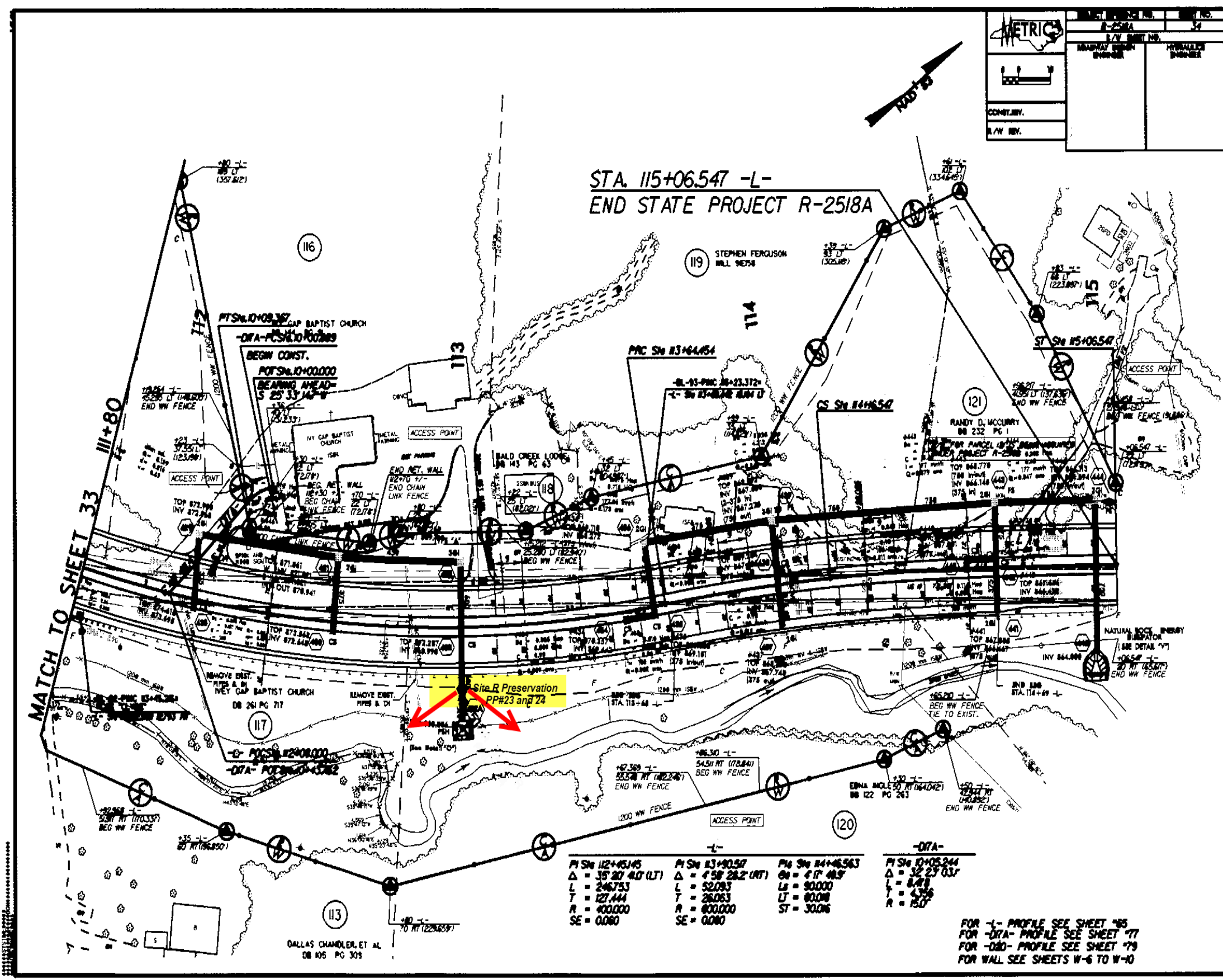
Pk Sta 98+21.280  
 Gs = 6' 48" S  
 Ls = 90.000  
 LT = 80.008  
 ST = 30.008

FOR -L- PROFILE SEE SHEET 31









STA 115+06.547 -L-  
END STATE PROJECT R-2518A

METRIC	
PROJECT NO.	R-2518A
DATE	11/14/03
BY	W. J. B. / J. B. B.
CHECKED BY	
DATE	

MATCH TO SHEET 33  
111+80

PI	STATION	DELTA	LENGTH	CHORD	CHORD BEARING	CHORD DISTANCE
PI S11	112+45.145	Δ = 35° 20' 40" (LT)	L = 246.753	C = 127.444	R = 400.000	SE = 0.080
PI S12	113+90.597	Δ = 4° 58' 28.2" (RT)	L = 52.083	C = 26.063	R = 800.000	SE = 0.080
PI S13	114+46.563	Δ = 4° 17' 48.5"	L = 90.000	C = 45.000	R = 300.000	ST = 30.006
PI S14	115+06.544	Δ = 32° 23' 03.7"	L = 84.718	C = 42.359	R = 15.0	

FOR -L- PROFILE SEE SHEET 75  
FOR -DRA- PROFILE SEE SHEET 77  
FOR -D&D- PROFILE SEE SHEET 79  
FOR WALL SEE SHEETS W-6 TO W-10

DALLAS CHANDLER, ET AL  
DB 105 PG 309